

IN THE SPECIFICATION

Please amend paragraphs [0089] and [0090] as follows:

[0089] The holographic memory system architecture utilizing the MEMS mirror for beam steering is shown in FIG. 11. Details of the system layout provide that a collimated laser beam 1100 first enters a polarizing beam splitter 1102, and on exit is split into two beams. The input beam subsequently passes through the data SLM (spatial light modulator) 1104, and image relaying lens pair 1106A-1106B (also referred to as lens L1 and L2 having focal distances f1 and f2 respectively), then impinges on an Iron doped Lithium Niobate ( $\text{Fe:LiNbO}_3$ ) photorefractive crystal (PRC) 1108. The imaging relay lens pair 1106A-1106B is used to scale the imaging size of the input SLM 1104 to match that of the input pupil of the PRC 1108. The imaging relay lens pair 1106A-1106B may also sharply image the input SLM 1104 image onto the recording plane of a CCD 1110 placed behind the PRC 1108.

[0090] The PRC 1108 is the holographic recording device capable of large capacity, rewriteable, holographic memory recording. The other beam (i.e. the reference beam) will first pass through the imaging relay lens pair 1106C-1106D (also referred to as lens L3 and L4 respectively) before impinging upon the MEMS mirror 1112. The laser beam will then be deflected by the MEMS mirror 1112 by a pre-determined incremental angle. The deflected reference beam will continue to pass through the third imaging relay lens pair 1106E-1106F (also referred to as lens L5 and L6 respectively) and reach the PRC 1108. The reference beam and the data beam intersect within the volume of the PRC 1108 forming a  $90^\circ$  recording geometry.. Focal lengths/distances (e.g.,  $f3+f4$ ) and aperture size of the lens pair

1106C-1106D is selected to compensate the scale difference between the input SLM 1104 aperture and that of the MEMS mirror 1112. Similarly, the lens pair 1106E-1106F feature dimensions (e.g., focal distances  $f_5$  and  $f_6$ ) that are selected to match the scale difference between the MEMS mirror 1112 and the PRC 1108 entrance pupil.